

GAFUN, YE.

USER/Chemistry - Solas
Chemistry - Electrolytes

Mar/Apr 49

PA 45/49T27
"Distribution of Electrolytes Between the Solid and Fluid Phases: I, Absorption of Silver Sulfate by Iron Hydroxide," T. N. Chernikova, Ye. I. Gapon, All-Union Inst of Fertilizers, Soil Sci and Agrotech [redacted] K. K. Gedroits, Moscow, 6 3/4 pp

"Kolloid Zhur" Vol XI, No 2

Iron hydroxide of a dialyzed sol prepared by hydrolysis of iron chloride absorbs silver and sulfate ions.
Similar sol prepared by hydrolysis of iron nitrate absorbs sulfate ions but practically no silver ions.

USSR/Chemistry - Solas (Contd)

Mar/Apr 49

Similar sol prepared by hydrolysis of iron sulfate absorbs practically no silver ions. Electrodialyzed gels of iron hydroxide absorb practically no silver or sulfate ions. Submitted 6 Jan 48.

45/49T27

Aluminum oxide for chromatographic analysis, V. N. Gapon, Zavodskaya Lab. 15, 120(1959).--A suspension of $\text{Al}(\text{OH})_3$ (1 g./10 ml.) in water must have pH 6-6.5 to be satisfactory for chromatography. Incubation at 100°-1000° for 4-8 min. is recommended. The product is suitable for cation analysis; for anion analysis it must be treated with NH_3 or HClO_4 . G. M. Kosolapoff

USSR/Physics Magnetographic Analysis

Chloro- Ions - Exchange

Ions - Exclusive
"Chromatographic Analysis of Ions: II, Cation Exchange Chromatographs of Cu^{2+} - Co^{2+} and Co^{2+} - Ni^{2+} ," T. B. Gapon, Ye. N. Gapon, 5 pp

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Zhur Anat. gives a formula $\lambda = \alpha V + \beta$ to describe the linear relation between the length of the zone λ and the volume V of the solution, of the cation and the volume V of the solution, where α and β are constants. Formula is applied to Cu^{2+} - Co^{2+} . Comparison of the coefficient α and the length of the zone in an ideal 57/49T105

USSR / Physics (Contd.)

May / Jun
94

USSR / Physics : Chromatograph shows that the zones (representing Cu_7^+ or Co_7^+) also contain an ion of sodium. Develops chromatic separation of the ions of cobalt and nickel on specially prepared permalite. Submitted 6 Jan 48.

57/49105

May/June 1994

Chromatography of ions. I. Theory of chromatography. K. N. Gapayev and T. B. Gapayev (Timiryazev Agr. Acad., Moscow). *Zhur. fizikal. Khim.* (J. Gen. Chem.) 19, 1627-31 (1945); cf. C. A. 43, 4482a.—In the case of pure cation exchange, i.e., in the absence of secondary anion adsorption, the length of the zone λ_i of the i th ion in an ideal ion exchange chromatogram (where each zone contains only one kind of ion) should be proportional to the concn. c_i of the ion and to the vol. v of soln. passed, $\lambda_i = Qc_i/vQ$, where the linear absorption capacity Q is defined by $Q = gS/L$ mg. equiv./cm.; L is the length of the column (cm.), g its wt. in g.; S the amt. of the exchange ion (mg. equiv.)/g.; in terms of the diam. d of the tube (cm.) and the bulk wt. of the adsorbent W (g./ml.), $Q = \pi d^2 W/54.4$. Under nonideal conditions, $\lambda > \lambda^*$. It exists with Al_2O_3 , $d = 0.782$ g., $L = 4.0$ cm., $d = 0.7$ cm., $W = 0.51$ g./ml., $S = 2.30$ mg. equiv./g., $Q = 0.45$, and a soln. of $\text{CuCl}_2 \cdot 0.1\text{N}$, $\text{Co}(\text{NO}_2)_3 \cdot 0.1\text{N}$, 1:1 vol. both the upper Cu^{++} and the lower Co^{++} zones increased in length linearly with the vol. v ; for the Cu^{++} zone, the empirical $\lambda = 0.10v + 0.1$, for Co^{++} , $\lambda = 0.20v + 0.0$, whereas $v/Q = 0.11$. At $v = 10$ ml., Cu^{++} appears in the filtrate. On elution with up to 6 ml. H_2O , the lower part of the Cu^{++} zone becomes of a purer blue, but its length remains substantially unchanged, 1.78 cm. for 0.8 mg. equiv. Cu^{++} , as against the ideal $\lambda^* = 1.11$ cm.; consequently, the Cu^{++} zone is not pure but contains also

Na. In an expt. with g 0.680, L 3.6, d 0.6, W 0.676, S 2.30, Q 0.440, soln. CuCl_2 0.1 N, $\text{Co}(\text{NO}_3)_2$ 0.1 N, 1:1 vol., up to 9 ml., the zone lengths were, for $\text{Cu}^{+2}\lambda = 0.1$, for $\text{Co}^{+2}\lambda = 0.4 \pi + 0.1$, i.e. twice as long as in the ideal case. With a soln. of Cu^{+2} 0.05 N alone, 10 ml., the real λ was 1.2 times the ideal λ^* , which again indicated Na ions. With a soln. CuCl_2 0.05 N, $\text{Co}(\text{NO}_3)_2$ 0.05 N, NaCl 1 N, up to 10 ml. (g 0.784, L 3.0, d 0.7, W 0.512, S 2.30, Q 0.40), the Cu^{+2} zone, $\lambda = 1.40 \pi + 0.1$, was about 3.8 times, the Co^{+2} zone, $\lambda = 1.3 \pi$, about 12 times longer than under ideal conditions. Only in very dil. soln., e.g. CuCl_2 0.01 N, $\text{Co}(\text{NO}_3)_2$ 0.01 N, vol. 1:1, were the zones of equal length, $\lambda = 0.02 \pi$, and only twice the ideal λ^* . The general empirical relation, at const. concn., is $\lambda = \alpha\pi + \beta$, where α and β have in general different values for the different ions in the mixt., contrary to the claim of Schwab and Dattler (C.A. 33, 9419). At const. vol., the length of a zone is approx. proportional to the initial concn. of the corresponding ion. However, as the length of a zone is strongly influenced by the amt. of other ions, chromatometry is quant. only with respect to an ion having an ion-selectivity many times that of all other ions c. present.

1896. Dynamics of Ion Exchange. (Dinamika ionnogo otmena) by E N Gapon
and T B Gapon Zhur Fiz Madynoi Khim 21 937-947 (1949)
Russian)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514310009-8

has been inadequately studied. In the present work a theory is given of these processes for the particular case of ion exchanges. If two ions are being exchanged between a solid adsorber and a solution, the increase of the molar part of one of the ions in the adsorbed state is determined by the following factors: the exchange constant, the initial molar parts of the ion in question in the adsorbed state and in the solution, and the ion ratio, i.e., the ratio of the absolute number of the exchanging ions in the solution to that of the exchanging ions in the adsorber. On the basis of this ratio a classification of ion exchange columns can be made: isotonic column (ion ratio = 1), hyperionic columns (<1), and hypoionic columns (>1). A method is shown for an approximate computation of sorptional distributions of two ions. For the case when the ionic ratio is equal to 1, there exists a linear relationship between the volume of

Z.N. GAPON

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the solution (of a given concentration) which has passed through the column, and the weight of the adsor'ent (of a given adsorption capacity). This relationship has the same physical meaning as a similar equation in the dynamics of vapor adsorption, as derived by Shilov et al. [Zhur Russkogo Khimicheskogo Obschestva 61 1107 (1929)].

GAPON, S. N.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
General and Physical Chemistry

The theory of ion-exchange chromatography. E. N. Gapon, T. B. Gapon and E. S. Zhupakhtina. Issledovaniya po Oblasiti Khromatog. Trudy Vsesoyuz. Sistemchaniya Khromatog., Akad. Nauk S.S.R., Otdel. Khim. Nauk 1950, 5-29 (Pub. 1952).—The theory of chromatographic processes is discussed with numerous examples of sepn. of 2 or 3 components. 10 references. G. M. Kosolapoff

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2 Chem

GAPON, E.N.

Radiochromatographic method and its significance. E.N.
Gapon and V. V. Rachinskii. *Issledovaniya v Oblasit'*
Khromatog., Trudy Vsesoyus. Soveshchaniya Khromatog.
Akad. Nauk S.S.R., Otdel. Khim. Nauk 1950, 39-4(Pub.
1952); cf. C.A. 43, 7850d; Ivanenko, et al., C.A. 43, 40076.
—The use of chromatographic sepn. methods in connection
with labeled compds., contg. radioactive isotopes, such as
P³², is discussed theoretically and the applications to such
studies as phosphate mobility in soils, or biochem. reactions
are discussed. The "reading" of the results can be accom-
plished with radiation counters or photographically; most
useful is paper radiochromatography. G. M. Kosolapoff

GAPON, E.N.

Precipitation chromatography of ions. E. N. Gapon and I. M. Selen'kaya. *Voprosy Issledovaniya i Obrabotki Khromatogramm Trudy Vsesoyuz. Soveshchaniyu Khromatogr., Akad. Nauk S.S.R., Odsl. Khim. Nauk 1950, 35-40* (Pub. 1952).—The previously reported results (cf. C.A. 47, 1459b) are discussed and addnl. discussion is given of chromatograms of the silicates. Chromatograms of the silicates often display zones of clear adsorbent between the pts. Alternation of rings of the ppt. with rings of the pure adsorbent is observed in a ppt. of Fe(OH)_3 , when the soln. contains Fe^{++} and Hg^{++} ions. The better sepn. of zones in the method of pptn. chromatography, as compared with the usual chromatography, gives a better guarantee of true and clean sepn. of components in mixts. G. M. Kosolapoff

GAPON, Yu.N.

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Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
General and Physical Chemistry

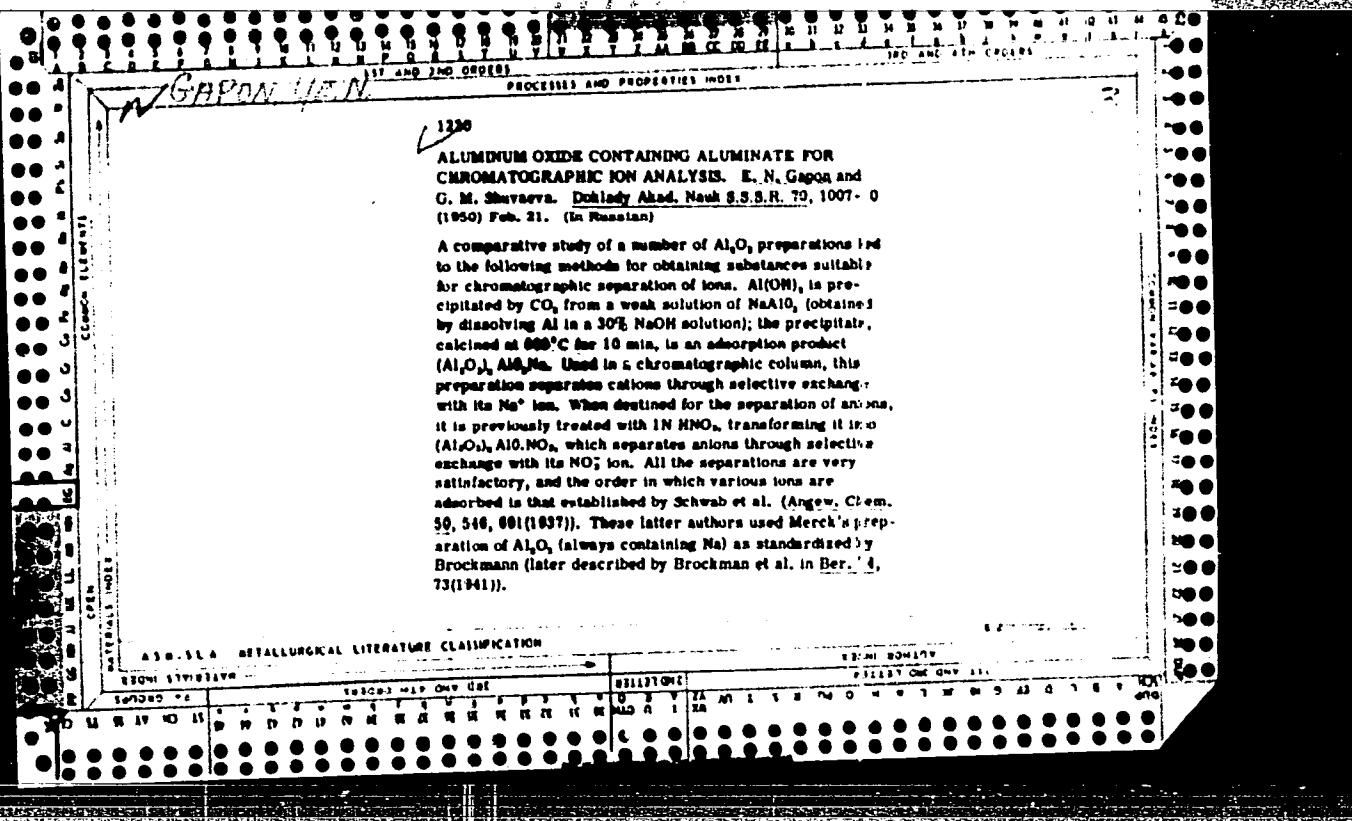
Chromatography of ions on the aluminate-oxide of aluminum. R. N. Gordin and G. M. Shuvayeva. *Ussreditobaniya v Oblasti Khromalog., Trudy Vsesoyus. Soveshchaniya Khromatog., Akad. Nauk S.S.R., Otdel. Khim. Nauk* 1950, 41-5. (Pub. 1952); cf. *C.A.* 43, 7859d; 44, 7708e.—The use of an adsorbent, named aluminate oxide of Al, in which the active group appears to be AlO_2Na , and which is prepd. by treatment of 2% Na aluminate with CO_2 , washing the pptd. hydroxide, drying at 100-30°, and calcining at 800° 10 min., is discussed (cf. preceding abstr.). The applicability and the general properties of this adsorbent are the same as those of the material prepd. according to Brockmann and Schodder (*C.A.* 35, 2390). G. M. Kosolapoff

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CA GATFON, Y.E.N.

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Determination of the absorptive capacity of ion-exchange materials. B. N. Gapon and I. M. Belenkaya (K. A. Timiryazeva Agr. Acad., Moscow). *J. Applied Chem. U.S.S.R.*, 23, 1419-20 (1950) (Engl. translation). A weighed amt. of adsorbent (1) was satd. with Ba^{++} by rinsing 0.1 N BaCl_2 through it. Without washing, the Ba^{++} was eluted with 0.01 N HNO_3 and detd. as BaSO_4 , and Cl^- was detd. as AgCl . The 1 used were chernozem (Suma and Budarino) soils, Na glauconite, alumina, and several zeolites. Rip G. Rice



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CIA-RDP86-00513R000514310009-8"

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Gapon, 42 N

Dynamic method of determination of the adsorption capacity. E. N. Gapon and E. S. Zhupakina. Doklady Akad. Nauk S.S.R. V8, T21-4(1961).--A soln. of Cu²⁺ (NO₃)₂ of a concn. so chosen that adsorption equill. is reached after passage of 200-250 ml., and that no Cu²⁺ is detected in the filtrate after passage of the 1st portion, is passed through a column of adsorbent 3-4 cm. high, in a tube 2 cm. in diam., by portions of 20 ml. at a time, and the filtrates are analyzed for Cu²⁺. The adsorption capacities of pectinite, glauconite, and different kinds of soils, detd. by this dynamic method, check on the whole with the capacities detd. by static methods, except for soils with a low adsorption capacity, where the dynamic method gives too low values. The same applies to all methods with too coarse a grain size (0.25-0.5 mm); these, therefore, ought to be previously comminuted. The main advantage of the dynamic method is the time saving.

DUBININ, M.M., akademik, otvetstvennyy redaktor; GAPON, Ye.N.; GAPON, T.B.;
ZHYPAKHINA, Ye.S.; RACHINSKIY, V.V.; BELEN'KAYA, I.M.; SHUVAEVA, G.M.;
ROGINSKIY, S.Z.; YANOVSKIY, N.I.; FUKS, N.A.; KISELEV, A.V.; NEYMARK, I.Ye.;
SLINYAKOVA, I.B.; KHATSET, F.I.; LOSEV, I.P.; TROSTYANSKAYA, Ye.B.;
TEVLINA, A.S.; DAVANKOV, A.B.; SALDADZE, K.M.; BRUMBERG, Ye.M.; ZHIDKOVA,
Z.V.; VEDENIEVA, N.Ye.; NAPOL'SKIY, S.A.; MIKHAYLOVA, Ye.A.; KAZANSKIY, B.A.;
RYABCHIKOV, D.I.; SHEMYAKIN, F.M.; KRETOVICH, V.L.; BUNDEL', A.A.; SAVINOV,
B.G.; VENDT, V.P.; EPSHTEYN, Ya.A.

[Research in the field of chromatography transactions of the All-Union
Conference on Chromatography, November 21-24, 1950] Issledovaniia v oblasti
khromatografii; trudy Vsesoiuznogo soveshchaniia po khromatografii, 21-24
noiabria 1950 g. Moskva, Izd-vo Akademii nauk SSSR, 1952. 225 p.
(MLRA 6:5)

1. Akademiya nauk SSSR. Otdelenie khimicheskikh nauk.
(Chromatographic analysis)

GAPON, E. N.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

Precipitation chromatography of long... R. N. Gapon
and I. M. Belenkaya. Colloid J. (U.S.S.R.) 14, 183-88
(1953) (Engl. translation).—See C.A. 47, 14594.

H. L. H.

92-54
840

GAPON, E. N.

Brit. Abst.
Sept. 1953
General Technique
Laboratory Apparatus

2656. Secondary adsorption of ions on aluminated ~~alumina~~
aluminium oxide. G. M. Shubaeva and E. N. Gapon

(J. anal. Chem., USSR, 1953, 8, 50-52).--

Adsorption of cations on cation-exchange Al_2O_3 is known (Schwab and Jockers, Angew. Chem., 1937, 50, 546) to be accompanied by simultaneous adsorption of anions when the cations are multivalent. It is now shown that simultaneous adsorption of cations occurs on anion-exchange Al_2O_3 when the anions are multivalent. An explanation of these phenomena is given, and examples of their occurrence in chromatographic work are described. G. S. Smith.

(2) Chem

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GAPON, Ye.N.; IVANENKO, D.D.; RACHINSKIY, V.V.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514310009-

Application of radiochromatography to the study of the dynamics of adsorption exchange of phosphate ions on inorganic adsorbents.
Dokl. AN SSSR 95 no.3:567-570 Mr '54. (MLRA 7:3)

1. Moskovskaya sel'skokhozyaystvennaya akademiya im. K.A.Timirya-
zeva. Predstavлено академиком S.I.Vol'fkovichem.
(Chromatographic analysis) (Adsorption) (Phosphates)

GAFONENKO, B. K. Cand Geol-Min Sci -- (diss) "Peculiarities of ~~the~~ embryonic development in fruit plants." Kiev, 1959. 16 pp (Min of Agr UkrSSR. Ukrainian Acad Agr Sci), 150 copies (KL, 45-59, 144)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

CAPONENKO, G. Grigory

"Grassland System of Agriculture and Organization of Territorial Kolkhozes"

Sotsialisticheskoye Sel'skoye Khozyaystvo, 1949, No 2, pp21-28

Letopis' zhurnal'nykh Statey, 1949, item #9066

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

15-57-10-15001

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10,
p 281 (USSR)

AUTHOR: Gaponenko, F. T.

TITLE: Economic Indices for the Work of Automation of the
Electro-Mechanical Installations at the Kuybyshev Coal
Trust (Ekonomicheskiye pokazateli raboty avtomatiziro-
vannykh elektromekhanicheskikh ustanovok v trete Kuy-
byshevugol')

PERIODICAL: V sb: Avtomatzatsiya v ugol'n. prom-sti, Moscow,
Ugletekhnizdat, 1956, pp 11-15

ABSTRACT: The author gives data for the period from 1950 to 1955
on the amount of conversion to automatic and remote
control designs for mining installations (high- and low-
voltage water-drainage arrangements, ventilators in the
principal ventilating system, endless haulage hoists,
heating and other installations). According to the
Trust, 124 stationary electro-mechanical installations

Card 1/2

15-57-10-15001

Economic Indices for the Work of Automation (Cont.)

out of 225 were converted to automatic and remote control arrangements. This change-over freed 184 men of the operating personnel and led to a saving in wages and repair of equipment amounting to 2.148.400 rubles per year. The productivity of the Trust for the period from 1950 to 1955 increased 19 percent.

R. Teder

Card 2/2

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

~~GAPONENKO, F.T.~~

Operations in mines of the Kuybyshev Coal Trust. Ugol' 32 no.3:40-41
(MLRA 10:5)
Mr '57.

1.Trest Kuybyshevugol'
(Kuybyshev Province--Coal mines and mining)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

GAPONENKO, F.T.

Our tasks in the present seven-year period. Ugol' Ukr. 3
no.1:7-8 Ja '59. (MIRA 12:1).

1. Upravlyayushchiy trestom Kuybyshevugol'.
(Donets Basin--Coal mines and mining)

KHRUSHCHEV, N.S.; PODGORNYY, N.V.; ZASYAD'KO, A.F.; RUDAKOV, A.P.; KAZANETS, I.P.; SHILIN, A.A.; MEL'NIKOV, N.V.; BURMISTROV, A.A.; SHEVCHENKO, V.V.; MAYAKOV, L.I.; ROZENKO, P.A.; KUZ'MICH, A.S.; ZADEMIDKO, A.N.; BRATCHENKO, B.F.; STRUYEV, A.I.; KRASNIKOVSKIY, G.V.; BOYKO, A.A.; KAGAN, F.Ya.; USKOV, A.A.; VLADYCHENKO, I.M.; TOPCHIYEV, A.V.; DEGTYAREV, V.I.; KHUDOSOVVTSEV, N.M.; GRAFOV, L.Ye.; IVANOV, V.A.; KRATENKO, I.M.; GOLUB, A.D.; IVONIN, I.P.; SAVCHENKO, A.A.; ROZHCHENKO, Ye.N.; CHERNEGOV, A.S.; MARKELOV, M.N.; LALAYANTS, A.M.; GAPONENKO, F.T.; POJUEKTOV, I.A.; SKLYAR, D.S.; PONOMARENKO, N.F.; POTAPOV, A.I.; POLYAKOV, N.V.; SUBBOTIN, A.A.; POLSTYANOY, G.N.; TRUKHIN, P.M.; TKACHENKO, A.G.; OSTROVSKIY, S.B.; NYRTSEV, M.P.; DYADYK, I.I.; SHPAN'KO, T.P.; RUBCHENKO, V.P.

Kondrat Ivanovich Pochenkov; obituary. Sov. shakht. 11 no.9:
48 S '62. (MIRA 15:9)

(Pochenkov, Kondrat Ivanovich, 1905-1962)

GAPONENKO, F.T.

Miners of the Donetskugol' Combine struggle to carry out the
resolutions of the 22d Congress of the CPSU. Ugol' 37 no.8:
13-14 Ag '62. (MIRA 15:9)

1. Nachal'nik kombinata Donetskugol'.
(Donets Basin--Coal mines and mining)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

GAPONENKO, G.

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Organizatsiya I oplate truda v kolkhozakh, Plan. Khoz-vo, 1949, No. 5,
s. 47-62

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

GAPONENKO, F. T.

Correlation analysis of the mechanization of stoping operations.
Ugol' 37 no.10:39-42 0 '62. (MIRA 15:10)

1. Nachal'nik kombinata Donetskugol'.

(Stoping(Mining)) (Mine management)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

GAFONENKO, G.S.; GRITSKOV, M.K.; PCPOVA, I.K.; KOSTIN, V.P.; red.

[For creative agricultural planning] Tvorcheski planirovaniye sel'skogo khoziaistva. Moskva, Ekonomika, 1967. 126 p.
(MIRA 17:12)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

ZAL'TSMAN, L.M., prof., doktor sel'khoz. nauk, red.; OBOLENSKIY, K.P.,
kand. ekon. nauk, red.; KOLESNEV, S.G., akademik, red.;
GAPONENKO, G.S., kand. ekon. nauk, red.; RYBAKOVA, V.D., red.;
~~PUNOMAREVA, A.A.~~, tehn. red.

[Distribution and specialization in U.S.S.R. agriculture] Voprosy razmeshcheniya i spetsializatsii sel'skogo khoziaistva
SSSR. Moskva, Ekonomizdat, 1962. 637 p. (MIRA 16:1)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni
V.I.Lenina (for Kolesnev).
(Agriculture)

GAPONENKO, I.

The reconstruction has been completed, now get to work! Sov.
profsciuz 19 no.15:32 Ag '63. (MIRA 16:8)

1. Predsedatel' Minskogo sel'skogo oblastnogo komiteta professional'-
nogo soyuza rabotnikov gosudarstvennoy torgovli i potrebitel'skoy
kooperatsii, Minsk.

(Minsk Province--Trade unions--Officers)
(Minsk Province--Cooperative societies--Auditing and inspection)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

GAPONENKO, I.M.

Laboratory synthesis of a polyester glycerin-adipic acid resin.
Khim. v shkole 15 no.2:85-86 Mr-Ap '60. (MIRA L4:5)

1. Pedagogicheskiy institut g. Novozybkova, Bryanskoy oblasti.
(Resins, Synthetic)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

GAPONENKO, I.M.

Use of catalysts in a laboratory experiment on the synthesis of methane.
Khim. v shkole 15 no.5:65-66 S-O '60. (MIREA 13:10)

1. Pedagogicheskiy institut, g. Novosybkov.
(Methane) (Catalysts) (Chemistry--Experiments)

KACHANKO, I.Y., uchitel'; STOLETENKO, N.G. (Khabarovsk); SYROVATKO, A.D.,
uchitel'; GAPONENKO, I.M. (Novozybkov); SYROYEZHIN, I.T., uchitel'

Letters to the editor. Khim. v shkole 16 no. 3:87-89 My-Je '61.
(MIRA 14:5)

1. Zhelezno-dorozhnaya shkola No.35, st. Zdolbunovo (for Kachanko).
2. Shkola rabochey molodezhi No.2, g. Dnepropetrovsk (for Syrovatko).
3. Srednyaya shkola №.13, Kuybyshev (for Syroyezhkin).
(Chemistry--Study and teaching)

KRIVOV, A.A.; GAPONENKO, I.M.; USENKO, S.F., uchitel'; KUL'MAN, A.G., prof.

Editor's mail. Khim. v shkole 17 no.3:82-83 My-Je '62. (MIRA 15:6)

1. Pedagogicheskiy institut, g. Daugavpils, Latviyskaya SSR (for Krivov). 2. Besedinskaya srednyaya shkola, Kurskaya oblast' (for Usenko).

(Chemistry)

LOGINOV, A., kand.pedagog.nauk; KOVACH, S.K. (g.Satanov, Khmel'nitskoy obl.); BAYEV, S.Ya., uchitel'; POPOVA, A.N., uchitel'nitsa; ZAMULIN, G.T.; YEMEL'YANOVA, T.I.; PYATNITSKIY, M.P.; YAROSHCHUK, N.A., uchitel'; CHISTYAKOV, V.M., uchitel'; LENSHIN, A.S. (g. Novosibirsk); NOSKOV, V.I., (g.Feodosiya); RUD', K.A., uchitel'nitsa; VASIK, G.Ye., uchitel'; GAPONENKO, I.M.

Editor's mail. Khim. v shkole 15 no.3:73-78 My-Je '60. (MIRA 14:7)

1. Pedinstitut, g. Ulan-Bator (for Loginov).
2. Ordzhonikidzevskaya srednyaya shkola No.5, Stavropol'skiy kray (for Bayev).
3. Nikiforovskaya shkola sel'skoy molodezhi, Tambovskoy oblasti (for Popova).
4. Pedagogicheskiy institut g. Krasnodara (for Zamulin, Yemel'yanova, Pyatnitskiy).
5. Srednyaya shkola No.8, g. Vinnitsy (for Yaroshchuk).
6. Srednyaya shkola sovkhosa "Spartak" Saratovskoy obl. (for Chistyakov).
7. Srednyaya shkola No.14 g. Stalina (for Rud').
8. Shkola No.569 g. Moskvy (for Vasik).
9. Pedagogicheskiy institut, g. Novozybkov (for Gaponenko).

(Chemistry—Study and teaching)

TSLAF, N.Z. uchitel'; GONCHARENKO, A.S. (Alma-Ata); GAPONENKO, I.M.
(Novozybkov); SHEVCHENKO, T.T., uchitel'; PASHAYEV, E., uchitel' khimii;
FEDYAKIN, M.V., (Omsk)

Editor's mail. Khim. v shkole 18 no.1:81-83 Ja-F '63.
(MIRA 16:4)

1. Srednyaya shkola No.5, Moskva (for TSlaf). 2. Srednyaya shkola
No.1, g. Bolekhov, UkrSSR (for Shevchenko). 3. Kurkenskaya shkola
Dagestanskoy ASSR (for Pashayev).
(Chemistry--Experiments) (Chemical apparatus)

GAPONENKO, I.M.

Amphotericism of proteins as demonstrated by glutenin. Khim. v
shkole 18 no.3:82-83. My-Je '63. (MIRA 16:9)

1. Pedagogicheskiy institut, Novozybkov.
(Proteins--Experiments) (Gluten)

BAYEVSKIY, D.A., otv. red.; DADYKIN, R.P., red.; GAPONENKO, L.S., red.;
MATYUGIN, A.A., red.; MITROFANOVA, A.V., red.; KIND, T.B., red.
izd-va; TIKHOMIROVA, S.G., tekhn. red.

[Changes in the size and composition of the Soviet working class]
Izmeneniia v chislennosti i sostave sovetskogo rabochego klassa;
stbornik statei. Moskva, 1961. 371 p. (MIRA 14:8)

1. Akademiya nauk SSSR. Institut istorii.
(Labor and laboring classes—Statistics)

GAPONENKO, M.F.

Teratoma of the lumbar region. Khirurgiia 32 no.3:84 Mr '56.
(MIRA 9:7)

1. Iz Shchelkovskoy rayonnoy bol'nitsy Moskovskoy oblasti.
(LUMBAR CURVE--TUMORS)

GAPONENKO, M.F.; TSAREVA, Z.Ya.

Subcutaneous rupture of the retroperitoneal duodenum, caused by
injury. Khirurgija 33 no.4:145-146 Ap '57. (MIRA 10:7)

1. Iz khirurgicheskogo otdeleniya (zav. M.F.Gaponenko) Shchelkovskoy
bol'nitsy.
(DUODENUM--WOUNDS AND INJURIES)

GAPONENKO, M.F.

Case of a celomic cyst of the pericardium. Vest.khir. 78 no.1:103
(MLRA 10:3)
Ja '57.

1. Iz Shchelkovskoy rayonnoy bol'nitsy Moskovskoy oblasti (glavnnyy
vrach - B.Ya.Nesterenko)
(PERICARDIUM--TUMORS) (CYSTS)

1. GAPÓNENKO, N. I.
 2. USSR (600)
 4. Peronosporales
 7. New species of Beronospora on Sonchus oleraceus L. Bot. mat. Otd. spor. rast. 8, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

GAPONENKO, N. I.,

"Microflora of the Lower Parts of the Amu-Dar'ya River" (Dissertation for the Degree of Candidate of Biological Sciences) Min Higher Education USSR, Central Asiatic State U imeni V. I. Lenin, Tashkent, 1955

SO: M-1036 28 Mar 56

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

GAPONENKO, N.I.

Mycological flora of the lower reaches of the Amu Darya. Trudy
Inst. bot. AN Uz.SSR no.5:387-466 '59. (MIRA 14:5)
(Amu Darya Valley—Fungi)

GAPONENKO, N. I.

Some data on useful and injurious fungi of the lower Amu Darya
Valley. Uzb. biol. zhur. no.5:11-16 '60. (MIRA 13:11)

1. Institut botaniki AN UzSSR.
(Amu Darya Valley--Fungi, Phytopathogenic)
(Amu Darya Valley--Mushrooms, Edible)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

PANFILOVA, T.S.: GAPONENKO, N.I.; KARDAShev, M.A., doktor biol.nauk, o.t.v. red.; MOSHCHENKO, Z.V., red.; KARABAYEVA, Kh.U., tekhn. red.

[Mycoflora of the Angren River basin] Mikoflora basseina
r.Angren. Tashkent, Izd-vo AN Uzb.SSR, 1963. 207 p.
(MIRA 16:10)
(Angren Valley--Fungi)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

GAPONENKO, N.I.

Fungi imperfecti in Bukhara Province. Uzb. biol. zhur. 8 no.2:
29-33 '64. (MIRA 17:9)

1. Institut botaniki AN UzSSR.

KOSHKELOVA, Yelena Nikolayevna; GAPONENKO, N.I., kand. biol.
nauk, nauchn. red.

[Distribution characteristics of the fungi of Kopetdag]
Zakonomernosti raspredeleniya gribov Kopet-Daga. Ashkhabad,
Turkmenizdat, 1964. 46 p. (MIRA 18:3)

GAPONENKO, N.I.

Fungi of principal habitats and phytocenoses of Bukhara Province.
Uzb. biol. zhur. 9 no.5:53-57 '65. (MIRA 18;10)

1. Institut botaniki AN UzSSR.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

DEMIN, N.S.; MALIKOV, B.F.; GAPONENKO, N.M.; CHEL'DIYEV, A.Kh.

Ore chute sinking with the use of suspended cages. Gor. zhur. no.1:
34-36 Ja '56.

(Sadon--Shaft sinking)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

AUTHORS: Demin, N. S., and Gaponenko, N. M. SOV/149-58-4-5/26

TITLE: Production Prospects of the Mine "Molibden"
(Proizvodstvennyye vozmozhnosti rudnika Molibden)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya
Metallurgiya, 1958, Nr 4, pp 25-37 (USSR)

ABSTRACT: During recent years the known ore reserves of the
Tyrnyauz mining area have increased appreciably. In
view of the acute and growing requirements of the
Soviet economy for rare metals, the authors considered
it advisable to analyse the production prospects of the
"Molibden" mine from the point of view of increasing the
production and the efficiency of the applied systems of
working. A number of published (Refs 1-8) and
unpublished reports have been made on this problem.
One of these is a report on research work carried out
by the personnel of the Chair for Ore Mining of the
North Caucasian Mining-Metallurgy Institute based on
material collected in May, 1957. The workings of two
blocks are compared in great detail, giving factual
data relating to both. Certain measures are
recommended and the authors believe that if these are

Card 1/2

Production Prospects of the Mine "Molibden" SOV/149-58-4-5/26
adopted a considerable increase in productivity will
be obtained.
There are 7 tables, 5 figures and 9 Soviet references.

ASSOCIATION: Severokavkazskiy gornometallurgicheskiy institut.
Kafedra razrabotki mestorozhdeniy poleznykh iskopayemykh
(North Caucasian Mining-Metallurgy Institute. Chair
of Exploitation of Ore Deposits)

SUBMITTED: April 20, 1958

Card 2/2

GAPONENKO, N.M.

Trends toward the improvement of mining steep vein deposits
in hard rocks. Izv.vys.ucheb.zav.; tsvet.met. 5 no.1:26-32
'62. (MIRA 15:2)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra
razrabotki mestorozhdeniy poleznykh iskopayemykh.
(Mining engineering)

GUTYRYA, V.S. [Hutyryia, V.S.], doktor khim.nauk; PATRILYUK, K.I. [Patryliak, K.I.], kand.tekhn.nauk; GALICH, P.N. [Halych, P.M.], kand.tekhn.nauk; MASUMYAN, V.Ya., kand.tekhn.nauk; GAPONENKO, O.I. [Haponenko, O.I.]

Separation of aromatic hydrocarbons from kerosene-gas oil fractions.
Khim.prom. [Ukr.] no.2:20-22 Ap-Je '65.

(MIRA 18:6)

YEREMENKO, V.V., kand. tekhn. nauk; BEZVERKHIY, A.A., inzh.;
GAPONENKO, P.S., inzh.; SHEKHOVTSEV, Yu.G., inzh.

First Siberian plant for the production of agloporites in a
brick factory. Stroi. mat. 9 no.6:22-24 Je '63.

(MIRA 17:8)

APPROVED FOR RELEASE: 07/19/2001 by CIA-RDP86-00513R000514310009-8

ARG. JOUR. : RZhBiol., No. 3, 1959, No. 10663

AUTHOR : Gaponenko, T. K., Mikhortov, Ye. N., Stanislavskaya, T. A.
TITLE : Voronezh Agricultural Institute
TITLE : The Influence of Annual Plants on the Accumulation of
Organic Matter and Structure of Soil.

DATE, PG. : Zemledeliye, 1958, No. 1, 23-26

ABSTRACT : As the result of three-year experiments at Voronezh
Agricultural Institute, it is shown that mixtures of
Sudan grass with peas accumulate more organic matter in
the form of root mass (43.3-53.7 centner/ha of dry mass)
than perennial grasses (35.3-41.5 centner/ha). The
amount of water-stable aggregates in soils under perennial
grasses (45.6-53.9% particles of more than 0.25 mm) is
almost the same as their amount in soils under Sudan grass.

PAGE: 1/.

GAPONENKOV, T.K., doktor sel'skokhozyaystvennykh nauk, prof.;
POROYSKAYA, S.M., kand.sel'skokhozyaystvennykh nauk

Characteristics of the vegetative hybrid of durum wheat.
Agrobiologiya no. 3:392-395 My-Je '60. (MIRA 13:12)

1. Voronezhskiy sel'skokhozyaystvennyy institut.
(Wheat) (Grafting)

5.3500

77673
SOV/80-33-2-48/52

AUTHORS: Gaponenkov, T. K., Stanislavskaya, T. K., Ivanova, Z. A.

TITLE: Brief Communications. Concerning the Preparation of
Araban From the Press of Sugar Beets, Using Ion Exchange
Resin

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp
494-496 (USSR)

ABSTRACT: The isolation and purification of araban from sugar
beets was studied. Araban was isolated from pectin
and also from sugar beets using ion exchange resins:
anion exchange resin EDE-10, which was converted
into OH-form with 0.25 N NaOH, and cation exchange
resin KU-1, which was converted into H-form with 1
N HCl. Araban yield from pectine, 23-25% and from
sugar beets, 5-6%. The obtained product (powder)
dissolves readily in water, refraction index 1.5465
(aqueous solution, concentration is not given),
density 1.5550, mol wt = 5,200-5,500. Araban was
Card 1/2

Brief Communications. Concerning the Preparation
of Araban From the Press of Sugar Beets, Using
Ion Exchange Resin

77673
SOV/80-33-2-48/52

hydrolyzed with 4% H₂SO₄ and 1-arabinose was obtained
in 80-85% yield. The obtained araban contains about
40 arabinose units. There are 5 references, 4 Soviet,
1 German.

ASSOCIATION: Voronezh Agricultural Institute, Laboratory of Organic
Chemistry (Laboratoriya organicheskoy khimii Vorone-
zhskogo sel'skokhozyaystvennoogo instituta)

SUBMITTED: September 14, 1959

Card 2/2

GAPONENKOV, T.K.; PROTSENKO, Z.I.

Determining pectin substances in apples by means of the
photoelectric colorimeter according to the coloring reaction.
Kons.i ov.prom. 18 no.1:29-30 Ja '63. (MIRA 16:2)

1. Voronezhskiy sel'skokhozyaystvennyy institut.
(Pectin—Analysis) (Apple)

GAPONENKO, V.G., gornyy inzhener.

Use of the KM-1 rock-loading machine for sinking sloping shafts.
Ugol' 29 No.7:42-44 Jl '54. (MLRA 7:7)

1. Shakhta im. Oktyabr'skoy revolyutsii.
(Coal-handling machinery) (Shaft sinking)

SHLYK, A.A.; GAPONENKO, V.I.; KUKHTENKO, T.V.

Kinetics of C¹⁴ during the renewal of chlorophyll in barley and
tobacco plants. Fiziol. rast. 9 no.5:521-533 '62. (MIRA 15;10)

1. Laboratory of Biophysics and Isotopes, Byelorussian S.S.R.
Academy of Sciences, Minsk.
(Chlorophyll) (Carbon—Isotopes)

GAPONENKO, V.I.

GAPONENKO, V.I.: "The significance of nitrogen and phosphorus for the life functions of phytoplankton in the mineral fertilization of ponds". Minsk 1955. Belorussian State U imeni V.I. Lenin. (Dissertations for the Degree of Candidate of Biological Sciences).

SO: Knizhnaya letopis' No 45, 5 November 1955. Moscow.

GAPONENKO, V. I.
USSR/Biology - Ecology

Card 1/1 Pub. 22 - 46/54

Authors : Vinberg, G. G.; Godnev, T. N., Act. Memb. of Byeloruss. Acad. of Sc.;
Title : and Gaponenko, V. I.
Application of the P radio isotope in studying the fertilization of ponds

Periodical : Dok. AN SSSR 100/3, 575-578, Jan 21, 1955

Abstract : The role of phosphorous fertilizers as a means of increasing the fish productivity of ponds is explained. Methods of employing a phosphorus radio isotope during the study of pond fertilization are described. Some results obtained by means of these methods are listed. Five references: 2 USSR and 3 USA (1950-1953). Table, graph.

Institution : The V. I. Lenin Byelorussian State University

Submitted : November 4, 1954

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

GAPONENKO, V.I.

Phosphorus cycle in ponds following application of mineral fertilizers.
Trudy Biol. sta. na oz. Naroch! 'no. l:163-192 '58.

(MIRA 12:7)

(Fish ponds) (Phosphorus)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

VINBERG, G.G.; GAPONENKO, V.I.

Development of some aquatic organisms in cultures with different
activity of P³². Trudy Biol. sta. na oz. Naroch' no.1:193-196
'58. (MIRA 12:7)
(Fresh-water biology) (Phosphorus--Isotopes)

SHLYK, A.A.; PRUDNIKOVA, I.V.; GAPONENKO, V.I.; FRADKIN, L.I.

Conditions for determining the specific radioactivity of
chlorophyll in infinitely thin preparations. Dokl.AN BSSR
3 no.12:484-487 D '59. (MIRA 13:4)

1. Predstavleno akademikom AN BSSR T.N.Godnevym.
(Radioactivity--Measurement) (Chlorophyll)

GAPONENKO, V.I. [Гапоненко, В.И.]

Relation between the assimilation rate and chlorophyll content in
phytoplankton. Vestsi AN BSSR, Ser. биол. наука, no. 4:138-141 '59.
(Photoplankton) (Photosynthesis)

SHLYK, A.A.; GAPONENKO, V.I.; PRUDNIKOVA, I.V.; KUKHTENKO, T.V.; LYAKHNOVICH,
Ya.P.; KALER, V.L.

Comparative study of the renewal of chlorophyll in different parts
of the plant. Miziol, rast. 7 no.6:625-637 '60. (MIRA 14:1)

1. Laboratory of Biophysics and Isotopes, Byelorussian S.S.R.
Academy of Sciences, Minsk.
(Chlorophyll)

SHLYK, A.A.; GAPONENKO, V.I.; KUKHTENKO, T.V.

Spectral properties and nature of chlorophyll a'. Dokl.AN BSSR 4
no.9:393-397 S '60. (MIRA 13:9)

1. Laboratoriya biofiziki i izotopov AN BSSR. Predstavлено акад.
АН BSSR T.N. Godnevym.
(Chlorophyll)

SHLYK, A.A.; GAPONENKO, V.I.; KUKHTENKO, T.V.

The determining role of complete synthesis and breakdown of the
molecule in the renewal of chlorophyll. Dokl. AN BSSR 6 no.3:
189-192 Mr '62. (MIRA 15:3)

1. Laboratoriya biofiziki i izotopov AN BSSR. Predstavлено
академиком AN BSSR T.N.Godnevym.
(CHLOROPHYLL.)

SHLYK, A.A.; MIKHAYLOVA, S.A.; GAPONENKO, V.I.; KUKHTEKO, T.V.

Investigation of biosynthetic interrelations between chlorophyl a and b in Chlorella. Fiziol. rast. 10 no.3:275-287 My-Je '63.

(MIRA 16:6)

1. Laboratory of Biophysics and Isotopes, B.S.S.R. Academy of Sciences, Minsk.

(Chlorophyll) (Algae)

GAPONENKO, V.I. [Haponenka, V.I.]

Quantitative relation between the chlorophyll and photosynthesis.
thesis. Vestsi AM BSSR, Ser. bial. nav. no.4:28-33 '63.
(MIRA 17:8)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

ORLOV, V.N.; ORLOV, O. Yu.; PANOV, Ye.N.; CHAYKOVSKIY, Yu.V.; YAHLOKOV, A.V.;
GONCHARENKO, Ye.N.; GORBUNOVA, V.G.; KONOPLYANNIKOV, A.K.;
KUDRYASHOV, Yu.B.; REJK, V.D.; SHUENIKOVA, Ye.A.; TARUSOV, B.N.;
PETRUSEVICH, Yu.N.; IVANOV, I.I.; GAPONENKO, V.I.; ANTONOV, V.A.;
VOROB'YEV, L.N.; BURLAKOVA, Ye.V.; BURDIN, K.S.; PARKHOMENKO, I.M.;
AGAVERDIYEV, A. Sh.; DOSKACH, Ya. Ye.; TARUSOV, B.N.

Brief news. Biul. MOIP. Otd. biol. 70 no.6:158-171 N-D '65.
(MIRA 19:1)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

GAPCENKO, V. S.

GAPONENKO, V. S.: "The load capacity of the soils of Poles'ye and the selection of parameters for the support surfaces of soil cultivating machinery and tools." Min Higher Education Ukrainian SSR. Ukrainian Order of Labor Red Banner Agricultural Academy. Kiev, 1956
(Dissertation for the Degree of Candidate in Technical Sciences)

So: Knizhnaya Letopis', No. 18, 1956

GRIN', L.P.; GAPONENKO, V.S.

Conference on theory and practice. Sel'khozmashina no.4:32-33 Ap '57.
(MLRA 10:4)

1. Sekretar' orgkomiteta konferentsii (for Grin'). 2. Sekretar' sektsii
"Sovershenstvovaniye tekhnologicheskikh protsessov i konstruktsiy
sel'skokhozyaystvennykh mashin (for Gaponenko).
(Agricultural machinery)

GAPONENKO, Vasiliy Savel'yevich [Гапоненко, В.С.].

[Agricultural machines and their use] Sil's'kohospodars'ki
mashyny ta ikh vyuystannia. 2., perer. i dop. vyd. Kyiv,
Derzhsil'hospvydav URSR, 1964. 214 p. (MIRA 17:3)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8

GAFONENKO, Yu.A.; ZOTOV, M.D., maladchik mashiny

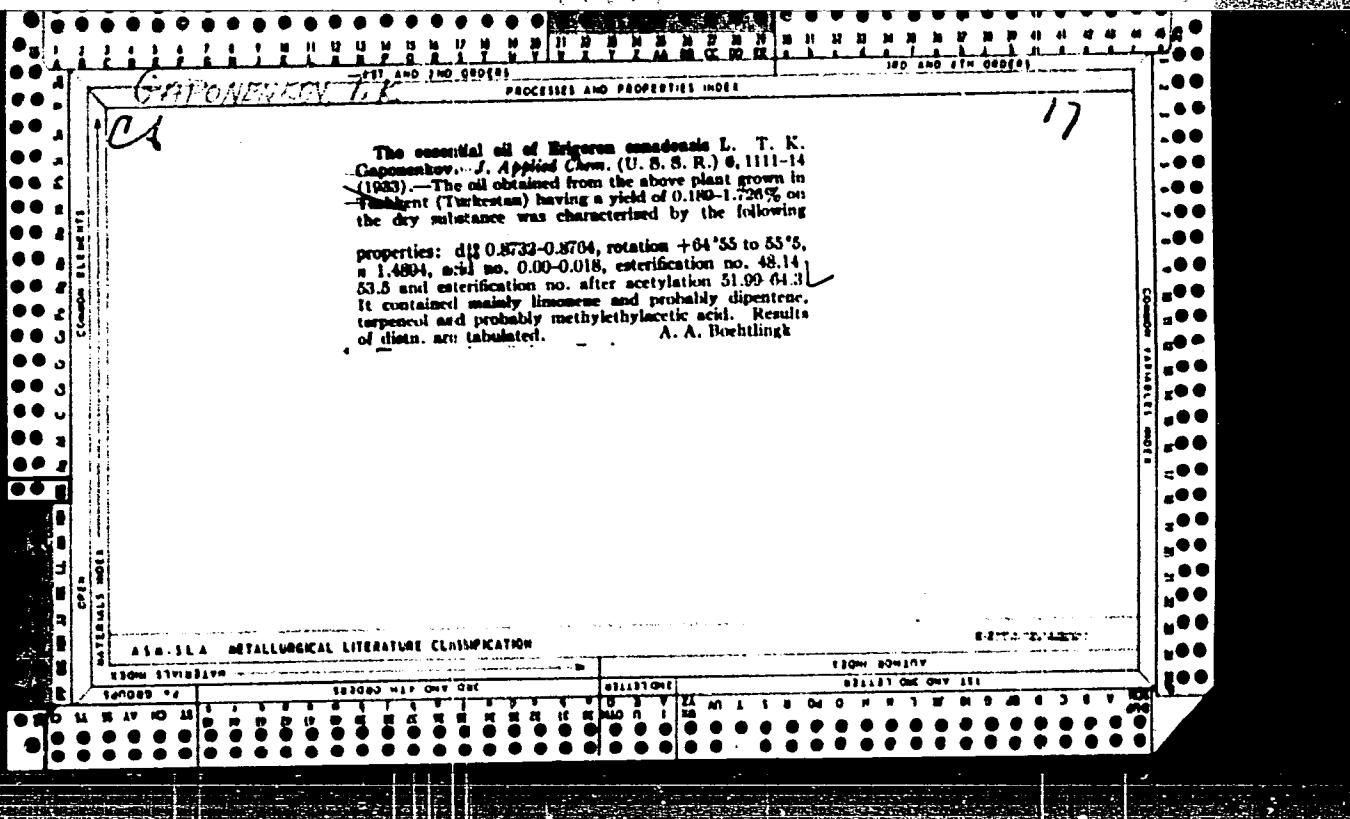
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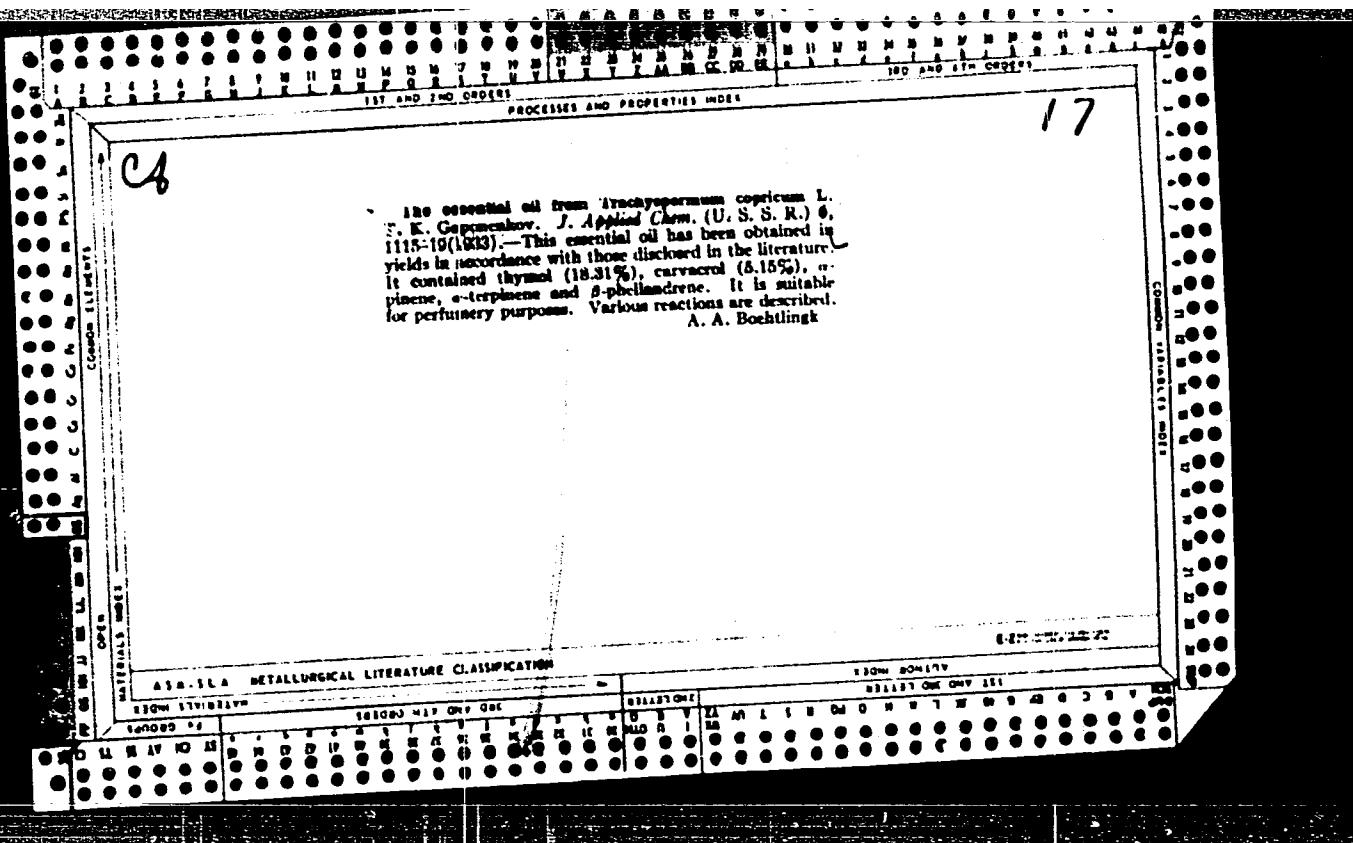
(MIRA 18:5)

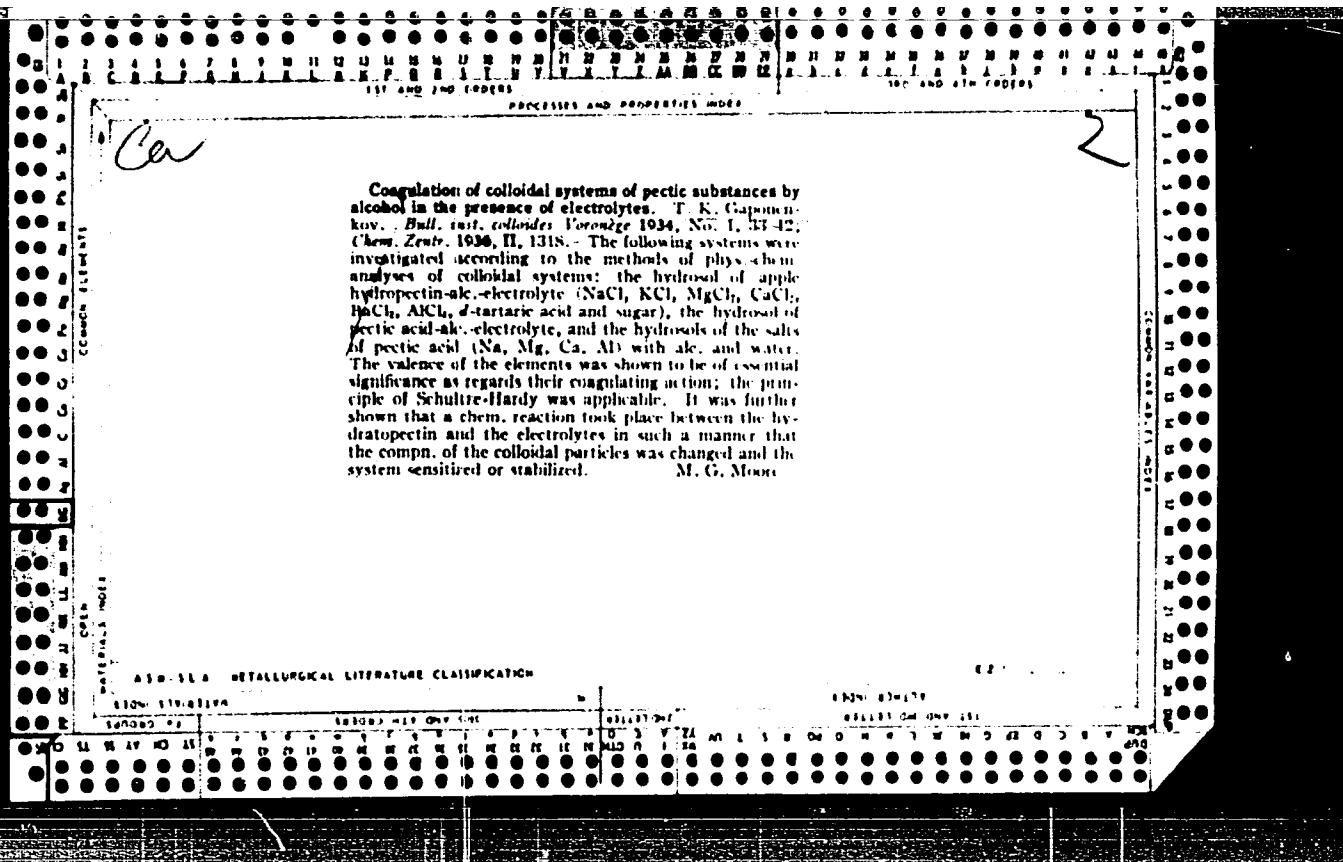
1. Nachal'nik rel'sosvarochnogo poyezda, stantsiya Syzran',
Kuybyshevskoy dorogi.

APPROVED FOR RELEASE: 07/19/2001

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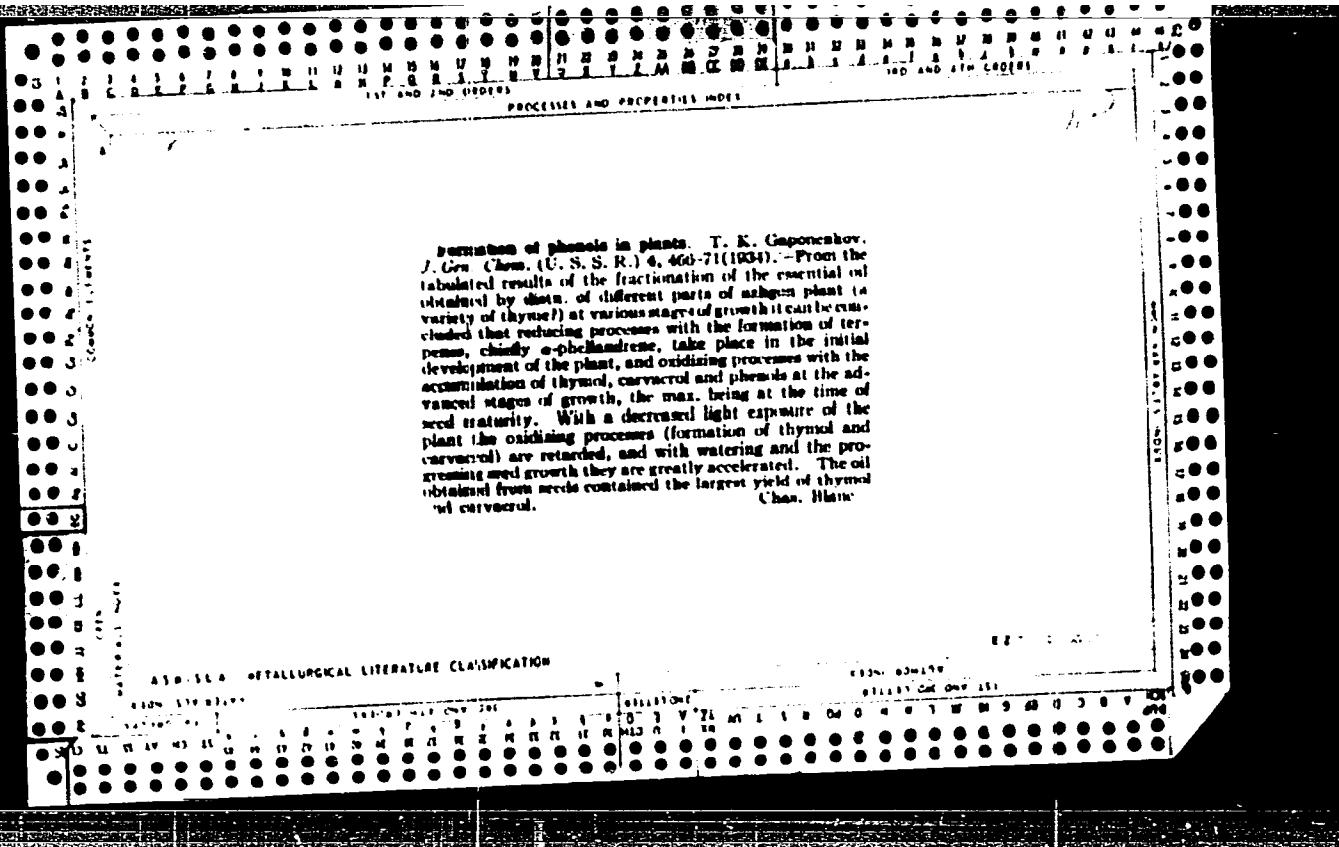


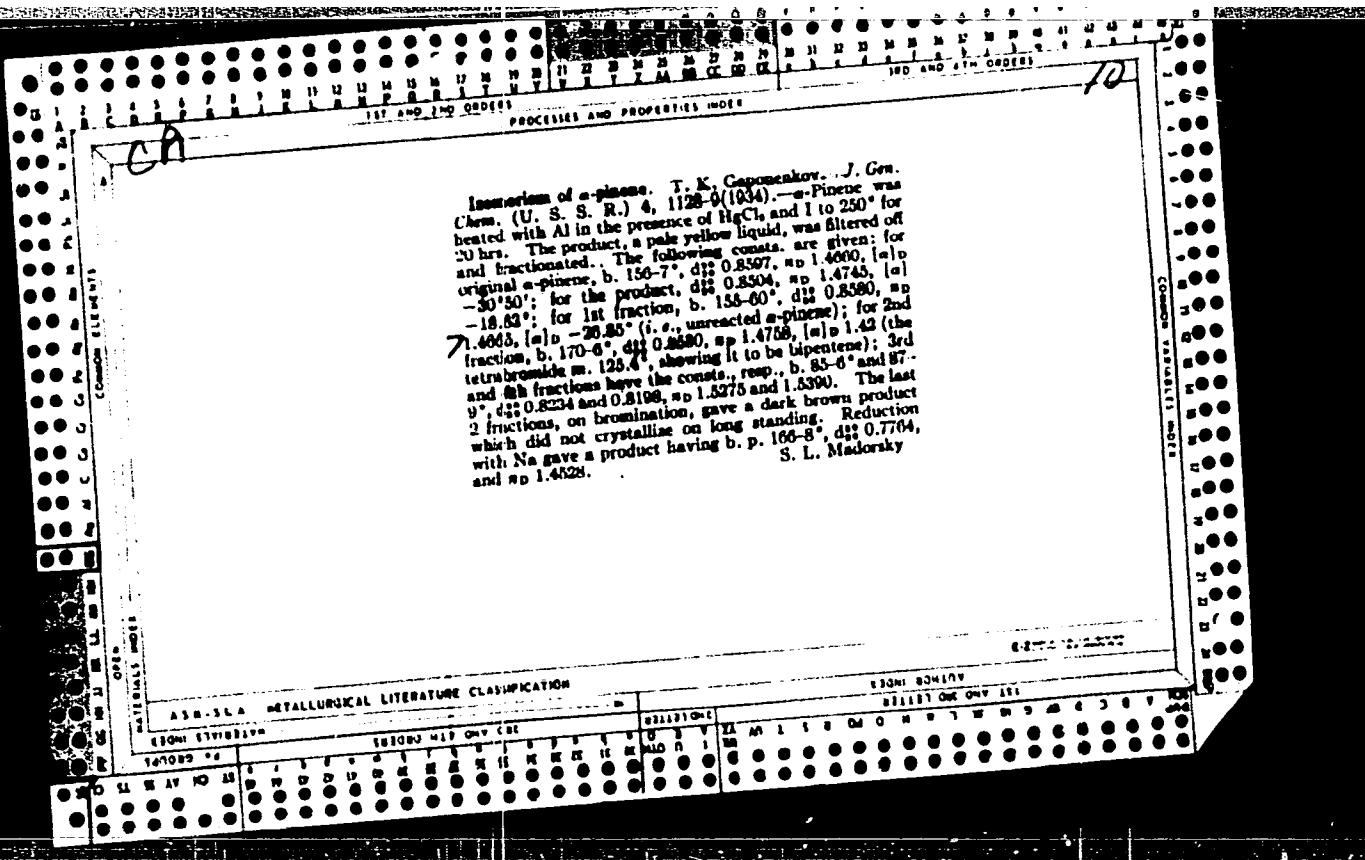


The physical-chemical properties of pectic substances. I. K. Gaponenkov and V. N. Mytnikova. *Izdatyu pozornosti*, 1937, Issledovat. Inst. Kolloid. Khim. No. 3, 117-280 (1934); cf. C. A. 32, 5270. Some of the properties of hydripectin prep'd. from apples and from sugar beets according to the method of which were studied. The yield in hydripectin obtained by hydrolysis was proportional to the time and temp. The d. of the hydripectin prep'd. from apples (I) was lower than that of the hydripectin from sugar beets (II). The viscosity and the water-binding power were both higher for I than for II. The surface tension of the hydripectin solns. was only slightly different from that of water, that of solns. of I being somewhat higher than that of solns. of II. The pH of I was somewhat lower than that of II. The Schultz-Hardy rule is applicable to the coagulation of hydripectin solns. with alc. in the presence of electrolytes. The gel-forming power was shown to be not only a function of the Me³⁺-groups present but also to depend upon the constitution of the pectin complex. The coagulation of hydripectin of pectic substances in the solvent mixture water-alcohol-ether. T. K. Gaponenkov, *Ibid.* 129-32; cf. preceding abstract and C. A. 32, 6477.—By use of the method of ternary solvents developed by Duman'skii (cf. C. A. 26, 2088), the coagulation of the colloids of pectic substances in a water-alc.-ether mixt. was studied and the hydrophilic properties were characterized. The hydripectin obtained from sugar beets represented a mixt. of colloids, the hydrophilic properties of which differed in degree. Ca and Mg precipitates were found to be strongly hydrophilic colloids, whereas arabin behaved as a weakly hydrophilic colloid. *Thesaurus Chem. Zentr.* 1938, II, 3026. M. G. M.

Through (from) 7.2017. 1998. 11. 1. 2017
F. APPLICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514310009-8"



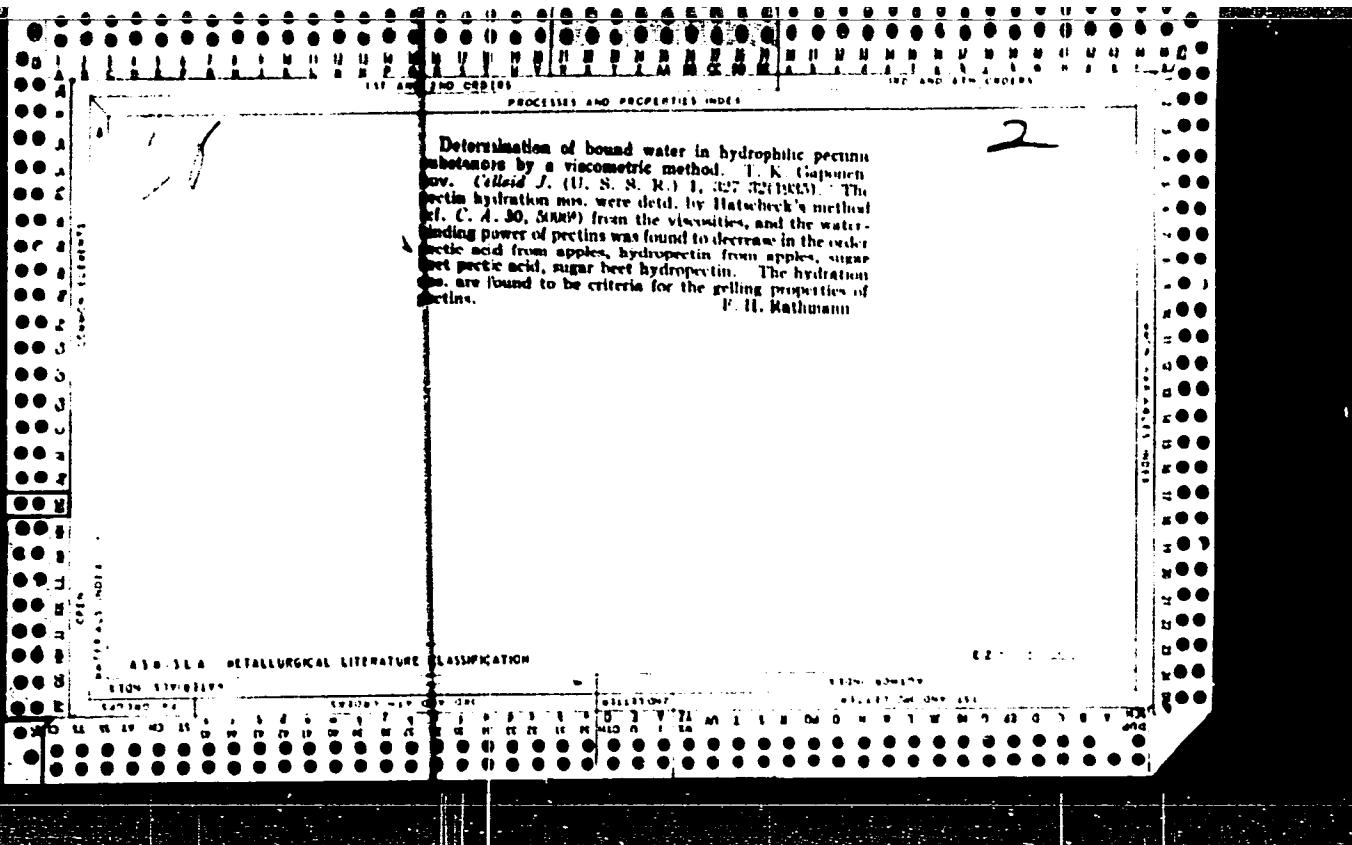


Changes in the yields of pectin hydrate with changes of the chemical hydrolysis of the protopectin. T. K. Gapunovskiy. *J. Applied Chem. (U.S.S.R.)* 7, 1037-45 (1934); cf. *C. A.* 29, 4220f.—The protopectin of apples and sugar beets is converted into a sol. pectin, the hydrapectin, when hydrolyzed with distd. water; the yield of hydrapectin increases with prolonged boiling. Hydrolysis with water acidified with tartaric acid gives high yields; probably an incomplete splitting of the protopectin is obtained in hydrolysis with water alone. The velocity of the hydrolysis is greatly increased with increase of the process tempo. Thirteen references. A. A. Bochtingek

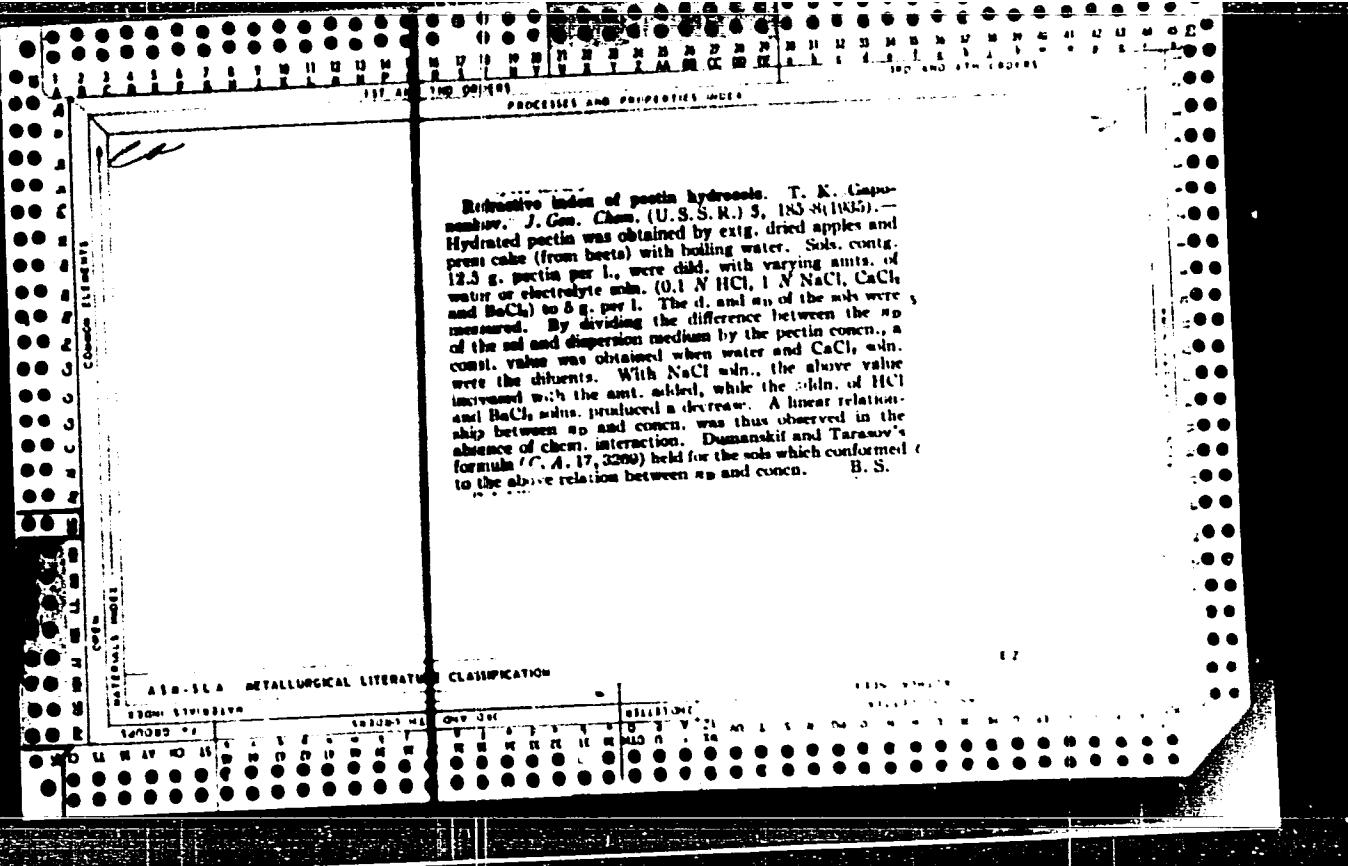
12

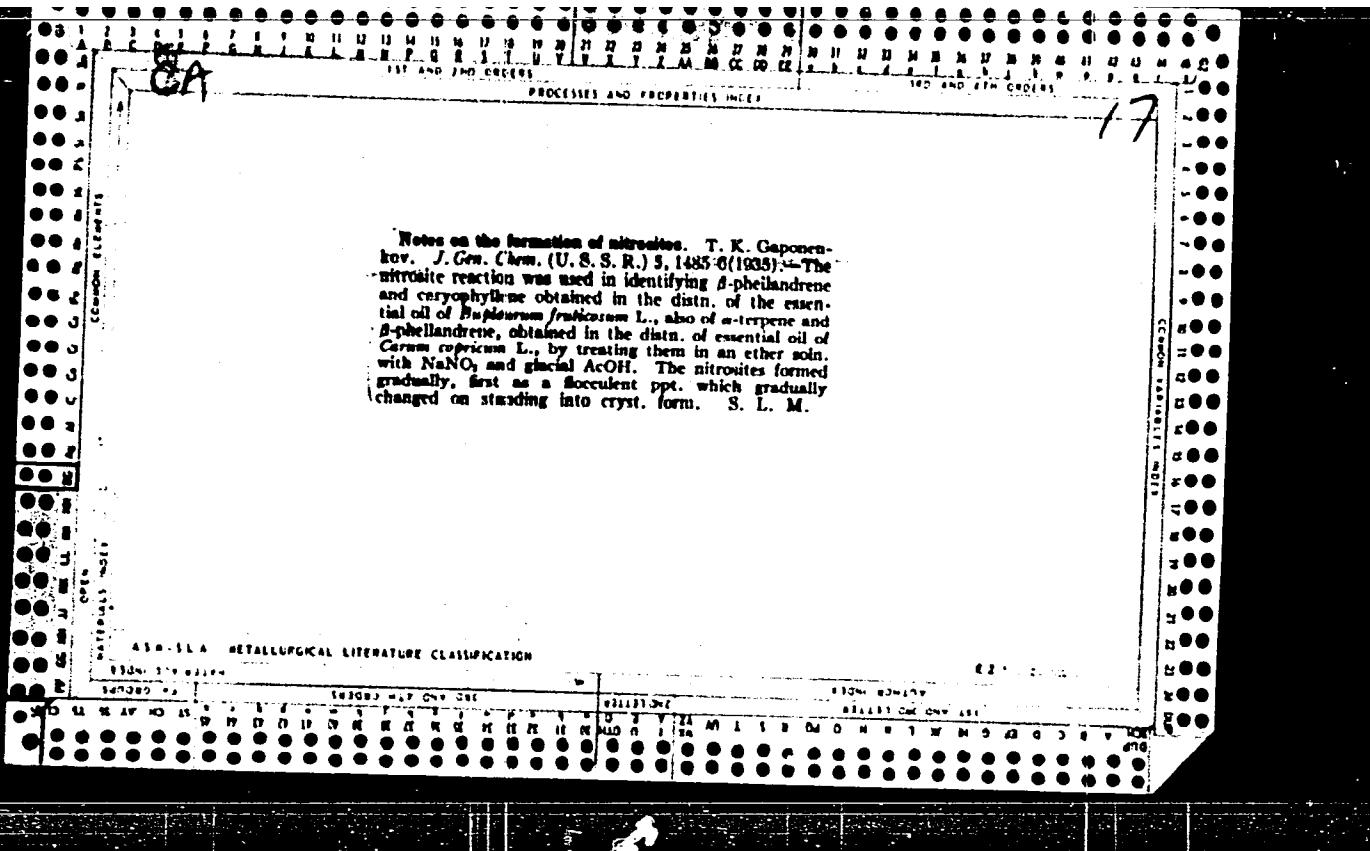
APPROVED FOR RELEASE: 07/19/2001

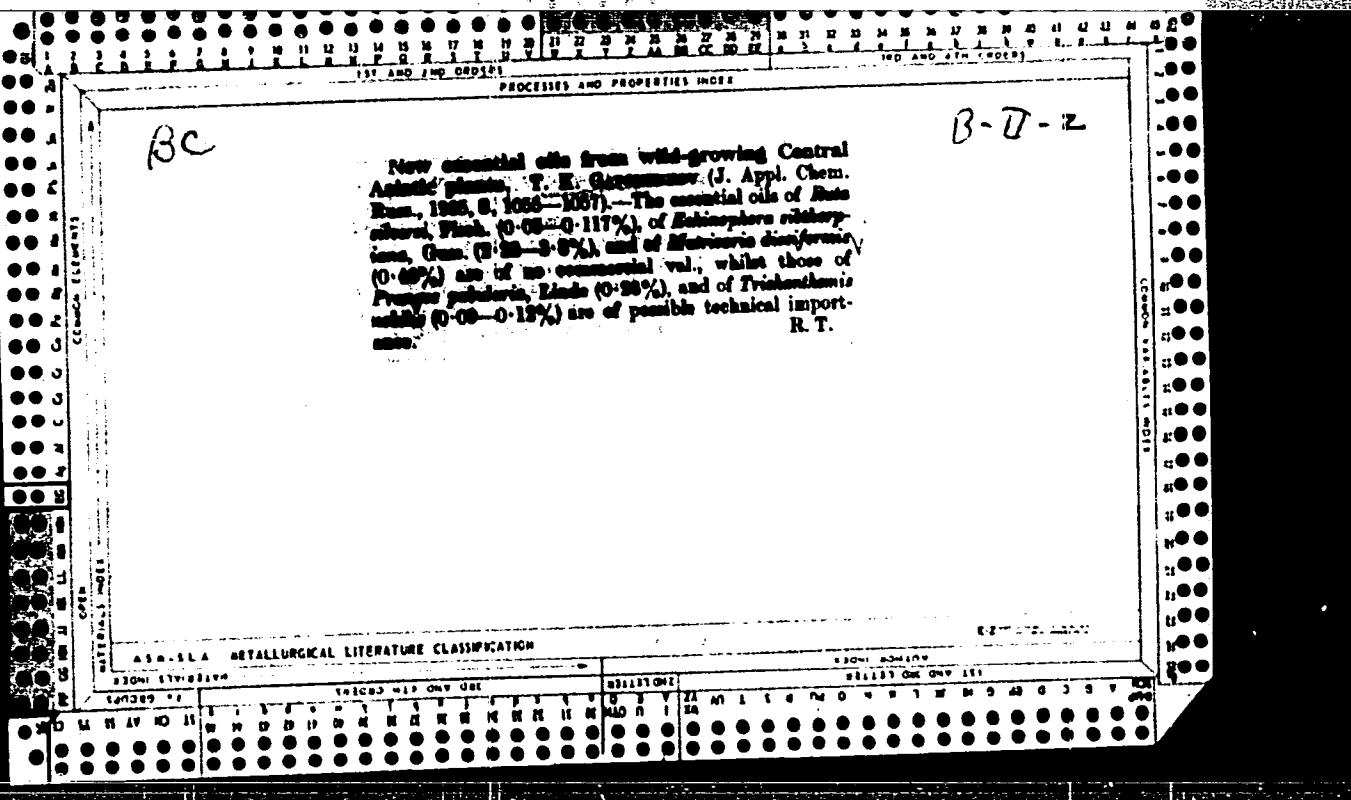
CIA-RDP86-00513R000514310009-8"



Refractive index of pectin hydrogels. T. K. Gaponenkov. *J. Gen. Chem. (U.S.S.R.)* 3, 183-81 (1933).—Hydrated pectin was obtained by exg. dried apples and press cakes (from beets) with boiling water. Soln. contg. 12.3 g. pectin per l., were dial. with varying amts. of water or electrolyte solns. (0.1 N HCl, 1 N NaCl, CaCl_2 and BaCl_2) to 8 g. per l. The d_4^2 and n_D^{20} of the solns were measured. By dividing the difference between the n_D^{20} of the soln and dispersion medium by the pectin concn., a constl. value was obtained when water and CaCl_2 solns. were the diluents. With NaCl solns., the above value increased with the amt. added, while the solns. of HCl and BaCl_2 solns. produced a decrease. A linear relationship between n_D^{20} and concn. was thus observed in the absence of chem. interaction. Dumanetskii and Tarasov's formula (*C. A.* 17, 3290) held for the sols which conformed to the above relation between n_D^{20} and concn. B. S.







Action of mineral inorganic substances on the gelatinization process of the system pectin-sugar-acid. T. K. Gaponenko and V. N. Mihurikova. *Colloid J. (U.S.S.R.)* 2, 47-50 (1938). Data are given for apple pectin with sugar, tartaric acid and the salts KCl , $NaCl$, $MgCl_2$, $CaCl_2$, $BaCl_2$ and $AlCl_3$. The first 2 decrease the stiffness, the $MgCl_2$ has very little effect, while the last 3, especially $BaCl_2$, strongly increase the gel stiffness. The effects are considered due to chem. binding of the cations in the pectin mol.

PUBLICATIONS RECEIVED

430.114 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

Mechanism of gelatinization of the system: pectin-sugar-acid. T. K. Gaponenkov. *Colloid J.* (U.S.S.R.) 2, 238-42 (1936); cf. preceding abstr. The ternary system pectin-mucic-tartaric acid (glycerol, alc.) was studied. In all cases gels are produced, but only in the case of the acid is the gel stable. With glycerol and alk.

Gelatinization was even better at first but crystn. and sepn. of sucrose are visible after 7 days. F. H. Rathmann

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AIA 11A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

Mutual interaction of pectic substances with sugars.
I. K. Gaponenkov and V. N. Muimnikova. *Colloid J.*
17, No. 3, S. B. R.Y.Z., 343-41 (1930). Dialysis of sugars is slower
in the presence of hydrated apple pectin than when hy-
drated sugar-beet pectin is present. The dialysis of opti-
cally active sugars is sharply reduced by optically active
colloids of opposite sign, and hastened by those of the
same sign. P. H. Rathmann

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

IN 400-000473

PROCESSES AND PROPERTIES OF

Physicochemical properties of araban. T. K. Caponetti, *J. Colloid. J. (U. S. S. R.)*, 2, 501-75 (1936).—Araban was prep'd. from the hydroxyprotein of sugar beets by treatment with 20 parts of 70% alc. at room temp. for 3 days, then filtered, evapd. to small vol. and dialyzed. Alc. was added to ppt., the araban as gray flakes, which were washed several times till colorless, with alc., then with ether, and finally dried *in vacuo*. The product was light gray, contained 0.48% ash and its solns. gave no precip. with $\text{Ba}(\text{OH})_2$, $\text{Ca}(\text{OH})_2$, $\text{Pb}(\text{OAc})_4$, and did not reduce Fehling's soln. Hydrolysis gave 85% arabinose. This araban was fractionated by 80, 75 and 70% EtOH to give fractions with mol. wts. of 5070, 6000 and 7000, resp. $D_\text{20} = 1.080$, the $n = 1.547$. It slightly increases the surface tension of solns. Data are given on the viscosity of various araban solns. at 20° to 40° . The μ detd. by different methods varies from 6.75 to 9.24. The elec. cond. is very small. Alkalies and alk. earths react to form arabanates which only very slowly react with CO_2 to form arabin. Both mannose and glucose are adsorbed by araban.

E. H. Kathmann

III. DETAILED LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000514310009-8"

A method for the separation of hyaluropectin into the calcium and magnesium salts of pectic acid and araban in the ternary system water-alcohol-ether. T. K. Gavrilova, N. R. V. and V. N. Muimirkova. *J. Applied Chem. (U. S. S. R.)*, 9, 345-354 (French 508) (1956). For complete precipitation of Ca and Mg pectates leaving the araban in solution, it is sufficient to add 50 cc. of a 2% hyaluropectin soln., to 200 cc. of EtOH or to a mixt. of 16.5 cc. of EtOH and 100 cc. of EtOH.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514310009-8"

PROCESSES AND PROPERTIES OF POLYMERS

K. Gaponenkov. *J. Applied Chem. (U. S. S. R.)* 9, 1304-13 (in English 1369) (1936).—A sample of pectin (0.26 g.) was dried from a 12% HCl soln. into a graduated cylinder connected with a series of flasks filled with 0.1 N Ba(OH)₂. The system should be carbonate free. The content of arabin was calcd. by the formula: $\{(\bar{F}_t - \bar{F}_0) / 0.024 \times 100\} / (\bar{A})$ %, where \bar{F}_t is the total furfural formed by the hydrolysis of all furfurlic-contg. substances, \bar{F}_0 , the furfural formed colorimetrically by the Sillén method (cf. C. A. 28, 674), in the filtrate collected in the graduate cylinder, \bar{A} , the amt. of furfural formed as the result of hydrolysis of the glucuronic complex, equal to $(0.0049 \times C \times 0.317)$, 2.04%, and 4 wt. of the sample. The percentage of pectic acid was calcd. by the formula: $(0.01245 \times 100) \times C / A$, and that of galacturic acid $(0.00099 \times C \times 100) / A$. C is no. of cc. of 0.1 N Ba(OH)₂ reacting with CO₂ formed during hydrolysis and detd. by the Balabukha method (cf. *Coll. Repts. on Technol. Chem. (U. S. S. R.)* No. 1, 55 (1930); C. A. 24, 4381). Empirical data are tabulated.

A. A. Podgorny

430-100-4 METALLURGICAL LITERATURE CLASSIFICATION

Physicochemical properties of tetragalacturonic acid.
T. K. Gaponenkov. *Coldm. J. (U. S. S. R.)* 3, 439-42 (1937).—Ruptil confirmation is given of the fact that tetragalacturonic acid is a tetrapolymer of galacturonic acid, with 3 free CO_2H groups. It is hydrophobic. The Lop. method gave a mol. wt. 720; $[\eta]_D^{\text{25}}$ for a soln. of 0.5 g. in 50 cc., 242.5°; μ (sp. cond.) of 0.5% soln. at 18°, 6.24 $\times 10^{-3}$; μ for 1% soln., 3.3. A table is given showing d. v., surface tension, viscosity and coagulation of solns. of this compd.
S. L. Madorsky

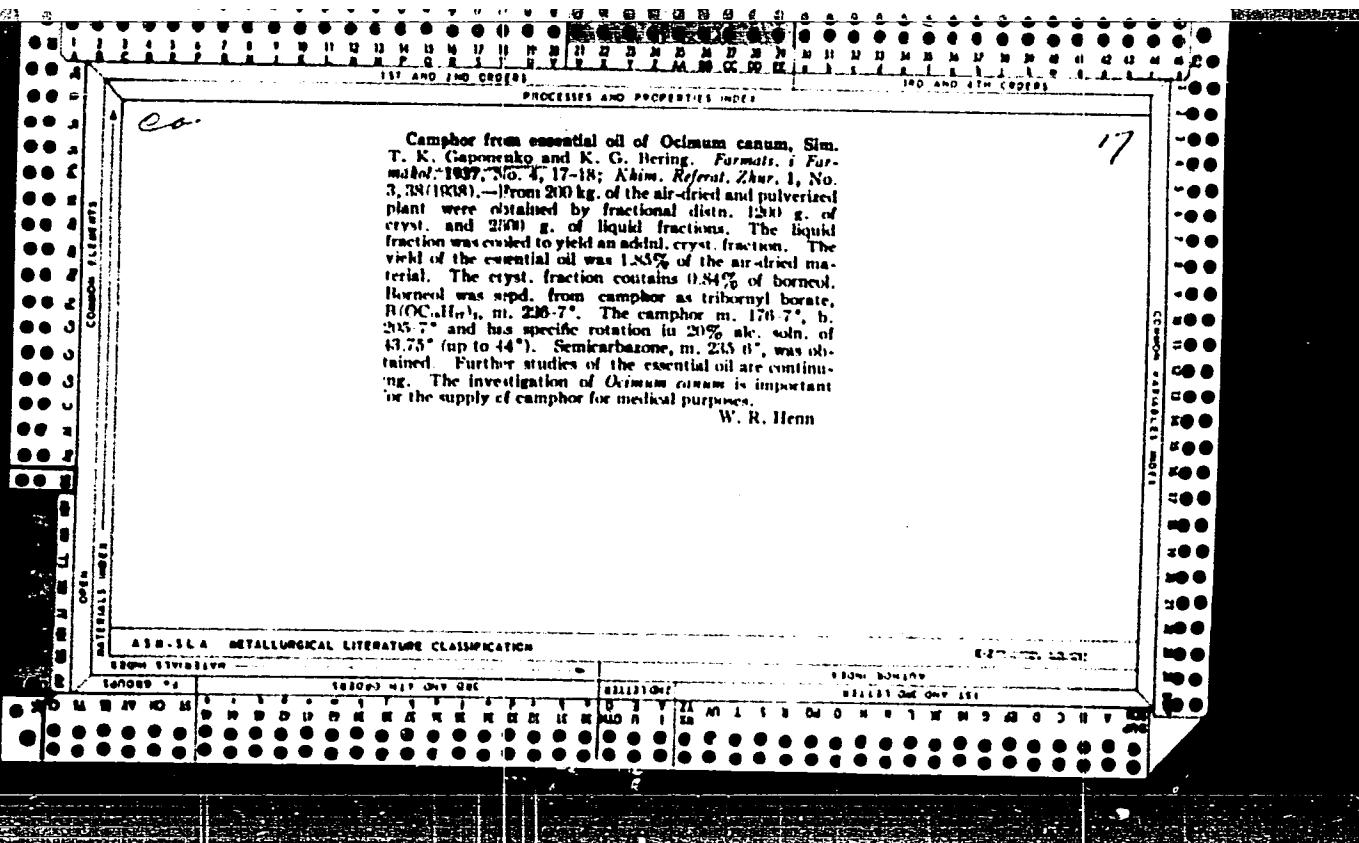
430.34 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514310009-8"

PROCESSES AND PROPERTIES. INDEX

The effect of organic substances on the stability of
arahan hydroxols. T. K. Gaponenkov. *Colloid J.*
(U. S. S. R.) 5, 643-6 (1907); cf. *C. A.* 31, 4180.
Arahan is a typical hydrophilic colloid, sol. in water, in
aq. solns. of org. substances (R_1OH , Me_2CO and R_2O) and
insol. in R_1OH , Me_2CO and R_2O . Arahan hydroxols pos-
sess great "relative viscosity" ($\frac{\eta_{\text{sol}} + \text{org. substance}}{\eta_{\text{H}_2\text{O}} + \text{org. substance}}$).
Owing to the phenomenon of dehydration the "relative
viscosity" decreases with increase in concn. of the org.
substances. Coagulation of the sols with R_1OH or Me_2CO
results in even more complete dehydration of the hydro-
philic molecules. John Livak

ATA-SEA METALLURGICAL LITERATURE CLASSIFICATION



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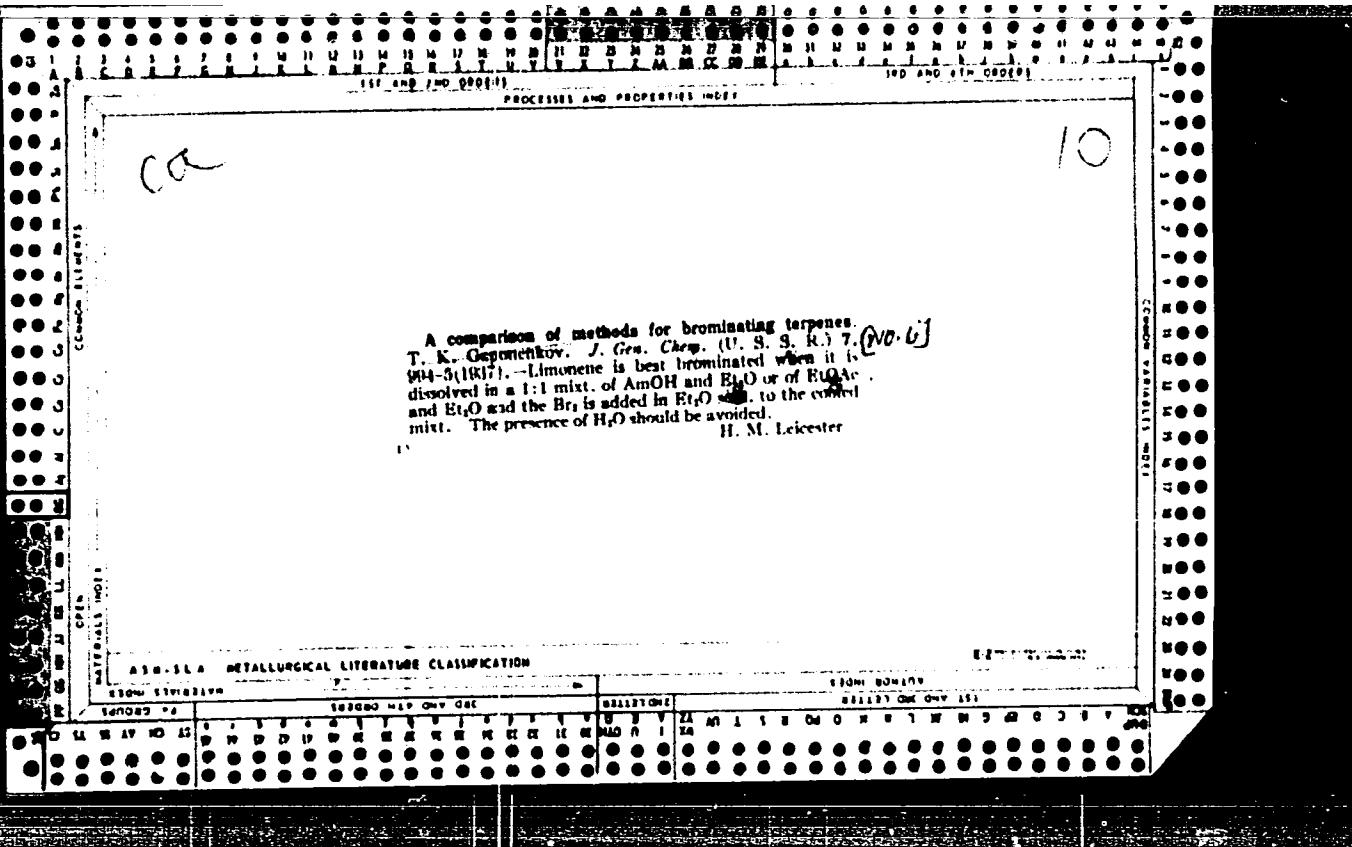
The action of alkaline bases on araban. T. K. Gaponenkov. *J. Russ. Chem. (U. S. S. R.)* 7, 200-41 (1927); cf. *C. A.* 31, 1849. The possibility of formation of alcohoholates (arabonates) by the action of electrolytes on araban (I) was studied by measuring any changes in the elec. cond., ρ_0 and viscosity of standard salts, of KOH, $\text{Ca}(\text{OH})_2$, $\text{Ba}(\text{OH})_2$, AgCl and KCl on arabin. It was established that the cond. is in inverse proportion to the viscosity of the medium. Hence, in the absence of a chem. reaction between I and the electrolytes, a decrease in the cond. is caused chiefly by the increasing viscosity. The results show that with the increasing I content, in the mixts., the cond. of all the systems gradually decreases. The accord between the exptl. sp. cond. A and the calcd. sp. cond. A_1 for the system $\text{KCl} + \text{I} + \text{H}_2\text{O}$ indicates the absence of a chem. reaction. The decreasing cond.

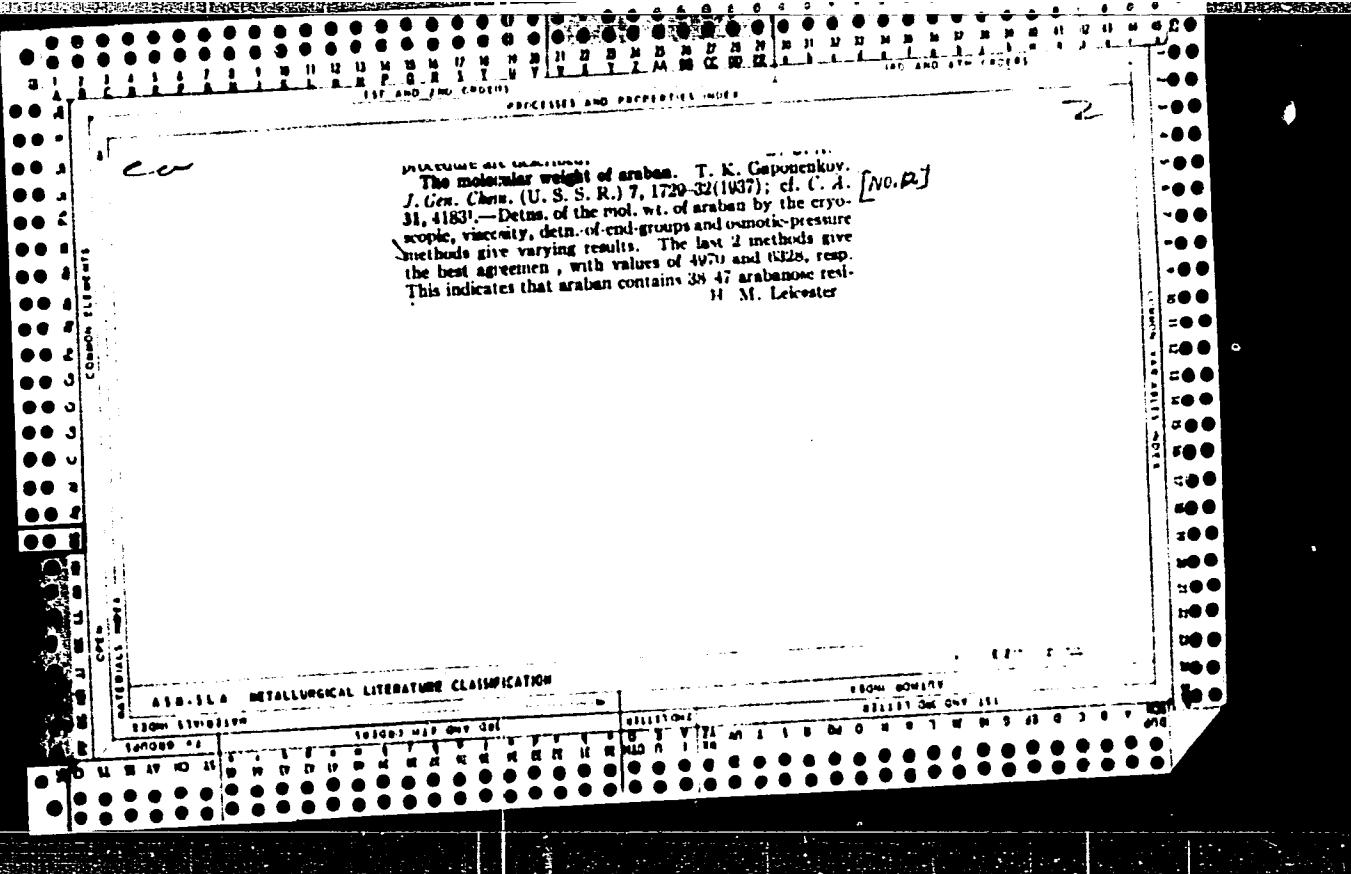
of KCl soln. on addn. of I is explained by the changes in the viscosity of the medium. The difference between the values K and K_1 for KOH, $\text{Ca}(\text{OH})_2$, and $\text{Ba}(\text{OH})_2$ solns. in the presence of I reveals definitely a chem. interaction. It follows that the resulting decrease of sp. cond. of the bases in H_2O on addn. of I is caused by the changed viscosity of the medium as well as the chem. reaction. The greater values for K than K_1 , obtained in the system $\text{AcONa} + \text{I} + \text{H}_2\text{O}$, are explained by the hydrolysis: $\text{AcONa} + \text{H}_2\text{O} \rightarrow \text{AcOH} + \text{NaOH}$. The liberated NaOH reacts with the shift of the equil. to the left, increasing the H^+ ion concn. and the cond. Decrease in μ_h ($\text{Ca}(\text{OH})_2$, AcONa) on addn. of I is explained by the decrease of OH ions in the soln. as a result of the chem. fixation.

A.I.D.-SEA METALLURGICAL LITERATURE CLASSIFICATION

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PRINCIPLES AND CONCEPTS

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[No. 13] T. K. Caponkov and V. N. Kazakov. *J. Gen. Chem. (U.S.S.R.)* 7, 1787-9 (1937).—Hydroxals of Ca or Mg precipitate are less easily coagulated by addition of EtOH if the soln. contains glucose, fructose, sucrose, maltose, lactose, glycine or citric acid. As the concn. of sucrose is increased, the solut. becomes more stable. II. M.

APPENDIX B: METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514310009-8